

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-31. (cancelled).

32. (previously presented) A system for the production of a clean industrial part, comprising:

(a) a casting material for forming a cast suitable for casting a part, comprising (i) foundry sand, (ii) binder, and (iii) a disintegration additive consisting essentially of an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte, wherein a portion of said casting material remains on said part after casting;

(b) a parts washer operable to contact said cast part with cleaning fluid comprising said electrolyte; and

(c) a power source having a first electrode and a second electrode of opposite polarity operable to contact said electrolyte.

33. (original) A system according to Claim 32, wherein said parts washer comprises one or more spray devices operable to apply said cleaning fluid on a surface of said cast part.

34. (original) A system according to Claim 32, wherein said parts washer comprises a fluid recirculator operable to collect and recycle said cleaning fluid.

35. (original) A system according to Claim 32, wherein said parts washer comprises a reservoir operable to immerse said cast part in said cleaning fluid.

36. (original) A system according to Claim 35, wherein said parts washer additionally comprises a fluid circulator operable to circulate fluid within said reservoir.

37. (original) A system according to Claim 32, wherein said parts washer comprises a holder operable to hold an automotive drive train part.

38-39. (cancelled).

40. (previously presented) A system according to Claim 32, wherein said first electrode is configured so as to contact said cast part which is electrically conductive.

41. (previously presented) A system according to Claim 32, wherein said first electrode is a cathode.

42. (previously presented) A system according to Claim 32, wherein said parts washer comprises a holder for said cast part, and said holder comprises said first electrode.

43. (previously presented) A system according to Claim 32, wherein said disintegration additive enhances electron/ion conduction when said casting material is contacted with said electrolyte.

44. (original) A system according to Claim 32, wherein said disintegration additive volatilizes from said casting material during the process of making said cast part.

45. (original) A system according to Claim 32, wherein said foundry sand comprises a material selected from the group consisting of: synthetic sand, bank sand, silica sand, and mixtures thereof.

46. (original) A system according to Claim 32, wherein said binder comprises a material selected from the group consisting of: phenolic urethane resin, clay, and mixtures thereof.

47. (currently amended) A method for making a clean metal part, comprising:
(a) casting a metal part using a mold initially formed using a casting material comprising (i) foundry sand, (ii) binder, and (iii) a disintegration additive comprising an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte;

(b) cleaning said cast metal part ~~parts~~ using a parts washer comprising a cleaner dispensing system that is operable to contact the metal part with said electrolyte; and wherein said parts washer comprises

~~(e)~~—a power source having a first electrode and a second electrode of opposite polarity operable to contact said electrolyte.

48. (original) A method for making a clean metal part according to Claim 47, wherein said parts washer comprises at least one spray device operable to apply cleaning fluid on a surface of said cast metal part.

49. (original) A method for making a clean metal part according to Claim 48, wherein said parts washer additionally comprises a fluid recirculator operable to collect and recycle said cleaning fluid.

50. (original) A method for making a clean metal part according to Claim 47, wherein said fluid dispersion system comprises a reservoir operable to immerse said metal part in cleaning fluid.

51. (original) A method for making a clean metal part according to Claim 50, wherein said fluid dispersion system comprises a fluid circulator operable to circulate said cleaning fluid within said reservoir.

52. (original) A method for making a clean metal part according to Claim 47, wherein said parts washer comprises a holder suitable for holding an automotive drive train part.

53 - 54. (cancelled).

55. (previously presented) A method for making a clean metal part according to Claim 47, wherein said first electrode is configured so as to contact said cast metal part.

56. (previously presented) A method for making a clean metal part according to Claim 47, wherein said first electrode is a cathode.

57. (previously presented) A method for making a clean metal part according to Claim 47, wherein said parts washer comprises a part holder comprising said first electrode.

58. (original) A method for making a clean metal part according to Claim 47, wherein said disintegration additive promotes disintegration of said foundry cast material from said cast metal part.

59. (original) A method for making a clean metal part according to Claim 53, wherein said disintegration additive enhances electron/ion conduction when said foundry casting material is contacted with said electrolyte.

60. (original) A method for making a clean metal part according to Claim 47, wherein said disintegration additive volatilizes during the process of making a cast with said foundry casting material.

61. (original) A method for making a clean metal part according to Claim 47, wherein said foundry sand comprises a material selected from the group consisting of synthetic sand, bank sand, silica sand, and mixtures thereof.

62. (original) A method for making a clean metal part according to Claim 47, wherein said binder comprises a material selected from the group consisting of phenolic urethane resin, clay, and mixtures thereof.

63. (previously presented) A method for making a clean metal part according to Claim 47, wherein said cleaning step further comprises:

(i) physically separating said cast metal part from said mold, to expose a metal part, wherein residual mold material remains on a surface of said metal part;

(ii) attaching said metal part to said power source having a first and a second electrode of opposite polarities, wherein said first electrode contacts said metal part;

(iii) contacting said metal part with said electrolyte, wherein said electrolyte is in contact with said second electrode; and

(iv) generating current through said electrolyte, from said first electrode to said second electrode.

64. (original) A method for making a clean metal part according to Claim 63, wherein said first electrode is a cathode.

65. (original) A method for making a clean metal part according to Claim 63, wherein said contacting is by immersing said metal part in a reservoir of said electrolyte.

66. (original) A method for making a clean part according to Claim 63, wherein said contacting is by spraying said electrolyte on a surface of said metal part.